

REMARKS

This amendment is in response to the Official Action dated February 4, 2010. Claims 28-40, 55, and 56 have been rejected over the prior art. Claim 28 has been amended to include subject matter found at least at Claim 55, which has been canceled. Claim 56 has been amended to depend from Claim 28. Favorable reconsideration of this application in view of the following remarks is respectfully requested.

Claim Objection

The Official Action objected to Claim 28 due to formalities. While not acquiescing in the objection, Claim 28 has been amended in a manner which renders this objection moot.

Rejections under 35 U.S.C. §103

a. The Official Action rejected Claims 28-29, 31, and 33-38 under 35 U.S.C. §103(a) as allegedly unpatentable over U.S. Patent No. 3,753,751 ("*Shannon*") in view of Great Britain Patent Publication No. 2,256,192 A ("*GB '192*"). Specifically, the Official Action alleges that *Shannon* discloses a method of making insulation material by route of filter-press technique by dispersing insulation material in water to form a slurry, then partially dewatering the slurry and treating under heat and pressure. The Official Action admits that *Shannon* is silent that the insulation material is based on dried precipitated silica, but alleges that it would have been obvious to make an insulation material based on dried precipitated silica in light of the alleged disclosure of *GB '192* (Official Action at page 3).

Claim 28 has been amended to include the features of Claim 55, which was not rejected on the above-noted grounds. Thus, the rejection has been obviated. Therefore, Claim 28 and all claims dependent thereon are patentable over the references as combined.

b. The Official Action rejected Claim 32 under 35 U.S.C. §103(a) as allegedly unpatentable over *Shannon* and *GB '192*, further in view of U.S. Patent No. 6,468,493 ("*Chevallier*").

c. The Official Action rejected Claim 30 under 35 U.S.C. §103(a) as allegedly unpatentable over *Shannon* and *Hughes*, further in view of *Chevallier*.

The rejections of Claims 30 and 32 have been obviated for the same reasons explained above.

d. The Official Action rejected Claims 28, 39-40, and 55-56 under 35 U.S.C. §103(a) as allegedly unpatentable over *Shannon* in view of European Patent Publication No. 0594469 ("*EP '469*"). Specifically, the Official Action alleges that *Shannon* discloses a method of making insulation material by route of filter-press technique by dispersing insulation material in water to form slurry, the partially dewatering the slurry, and treating under heat and pressure. The Official Action further alleges that *Shannon* discloses a drying process, but admits that *Shannon* is silent that the insulation material is based on dried precipitated silica. The Official Action relies on *EP '469* for the alleged disclosure of an insulation material comprising silica and the silica weight in the composition in the range of 45-90% (Official Action at page 6).

Initially, Claim 55 has been canceled. Thus, this rejection is moot as to Claim 55.

EP '469 not only fails to lead one of ordinary skill in the art any closer to the presently claimed invention and *Shannon*, but in fact leads teaches away from the method of amended Claim 28.

Claim 28 requires drying the filter cake in the compacted state.

Under MPEP §2141.02(VI), "a prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention". *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984).

EP '469 teaches pulverizing the filter cake to form a slurry, then drying the slurry, not the filter cake. Thus, *EP '469* teaches away from the requirements of Claim 28 because *EP '469* requires drying a slurry rather than a filter cake in the compacted state. Where, as here, a reference, when considered in its entirety, teaches away from the claimed invention, it is improper to combine the references. *In re Grasselli*, 713 F.2d 731, 743, 218 USPQ 769, 779 (Fed. Cir. 1983).

Advantageously, this distinction of the presently claimed invention provides the benefit of carrying out the drying step directly upon the compacted filter cake thus avoiding the extra pulverization step, and additionally eliminating the requirement of a separate mold for drying the aqueous slurry. See, e.g., page 5 of the present specification.

In addition, it would not have been obvious to one of ordinary skill in the art to even have combined *Shannon* with *EP '469* in the first instance. Contrary to the assertions contained in the grounds for rejection, *Shannon* teaches away from using

any insulating material other than alkaline metal silicate. The teachings of *Shannon* are limited to synthetically prepared bodies of molded high temperature thermal insulation material composed essentially of a matrix of chemically formed alkaline earth metal silicate interspersed with cotton fibers:

. . . finely comminuted and reactive proportions of alkaline earth metal and siliceous constituents which are thoroughly admixed with a preponderant amount of water to form an aqueous slurry of suspension . . . (column 6, lines 36-39)

Thus, contrary to the requirements of claim 28, the techniques described in *Shannon* do not involve filtering an aqueous dispersion containing precipitated silica particles. To the contrary, *Shannon* teaches reacting any silica present with an alkaline earth metal to form an alkaline earth metal silicate. Thus, contrary to the assertions contained in the Official Action, if one of ordinary skill in the art were to incorporate precipitated silica in the process of *Shannon*, the result would be a reaction of this precipitated silica within alkaline earth metal to render an alkaline earth metal silicate insulating material.

As such, *Shannon* teaches away from forming a thermal and/or acoustic insulation material from precipitated silica, and instead strongly favors and even requires the use of alkaline earth metal silicate to form such material. This is made clear from at least the following portions taken from the *Shannon* disclosure:

The porous integrated crystalline or microcrystalline structure of alkaline earth metal silicate thermal insulation materials gives rise to many desirable physical characteristics which, as is well-known to those skilled in the art, are not attainable with other types of thermal insulation materials. (Emphasis added) (Col. 1, lines. 49-54)

Before proceeding with a detailed description of the drawings, it is important to keep in mind that the nature and character of the present invention, as well as the structural and

physical features thereof. . .is such that it applies without limitation to all forms, shapes and customary usages of hydrothermally or new pneumatolytically molded bodies of hydrous alkaline earth metal silicate insulation materials.
(Emphasis added) (Col. 5, lines. 31-39)

Shannon clearly fails to disclose a process of forming a material from precipitated silica. In fact, *Shannon* goes a step further and teaches away from forming such insulating materials. *Shannon* is devoid of any hint that the objectives of the invention described therein can be achieved with any other insulative material other than an alkaline earth metal silicate. Thus, even if one of ordinary skill in the art were to attempt to incorporate silica into the process disclosed by *Shannon*, the result would be to react the silica with an alkaline earth metal to form alkaline earth metal silicate, thus falling outside the scope of the presently claimed invention.

Since both *Shannon* and *EP '469* teach away from Claim 28, Claim 28 and all claims dependent thereon are patentable over the references as combined.

Conclusion

In view of the foregoing, it is submitted that all claims are in condition for allowance. Should any questions arise in connection with this application or should the Examiner believe that a telephone conference with the undersigned would be helpful in resolving any remaining issues pertaining to this application, the undersigned respectfully requests that she be contacted at the number indicated below.

The Director is hereby authorized to charge any appropriate fees under 37 C.F.R. §§ 1.16, 1.17 and 1.20(d) and 1.21 that may be required by this paper, and to credit any overpayment, to Deposit Account No. 02-4800.

Respectfully submitted,

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